(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number
WO 2005/015958 A2

(51) International Patent Classification[7]: H05B 33/10, 33/14, 33/20, 33/22, C09K 11/56

(21) International Application Number: PCT/GB2004/003419

(22) International Filing Date: 9 August 2004 (09.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0318598.0	7 August 2003 (07.08.2003)	GB
0319838.9	22 August 2003 (22.08.2003)	GB
0407601.4	2 April 2004 (02.04.2004)	GB
0413717.0	18 June 2004 (18.06.2004)	GB

(71) Applicant *(for all designated States except US)*: **PELIKON LIMITED** [GB/GB]; Unit 6, Bar Hill Business Park, Saxon Way, Cambridge CB3 8SL (GB).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **FRYER, Christopher, James, Newton** [GB/GB]; 149 High Street, Cottenham, Cambridgeshire CB4 8SD (GB). **BLAKESLEY, Richard, Guy** [GB/GB]; c/o Pelikon Limited, Unit 6, Bar Hill Business Park, Saxon Way, Cambridge CB3 8SL (GB). **BARNARDO, Christopher, John, Andrew** [GB/GB]; 42 Grange Road, Bishops Stortford, Hertfordshire CM23 5NQ (GB). **TYLDESLEY, William, Frank** [GB/GB]; c/o Pelikon Limited, Unit 6, Bar Hill Business Park, Saxon Way, Cambridge CB3 8SL (GB). **POWELL, Mike** [GB/GB]; c/o Pelikon Limited, Unit 6, Bar Hill Business Park, Saxon Way, Cambridge CB3 8SL (GB). **GREEN, Andrew** [GB/GB]; c/o Pelikon Limited, Unit 6, Bar Hill Business Park, Saxon Way, Cambridge CB3 8SL (GB).

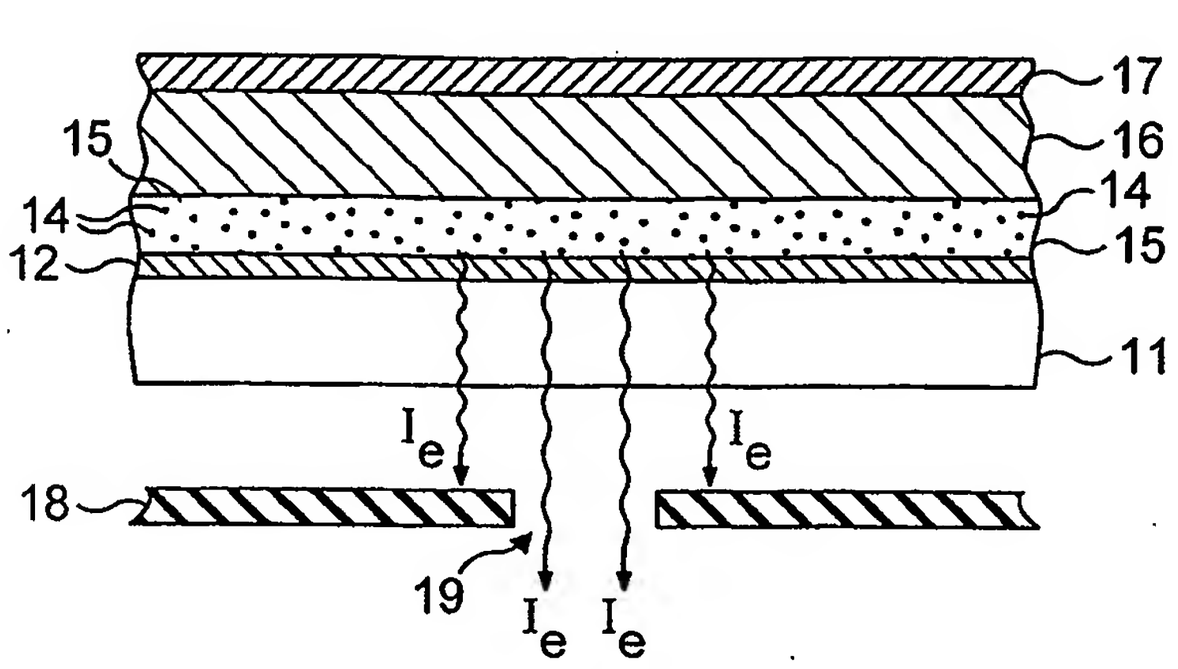
(74) Agent: **FRANK B. DEHN & CO.**; 179 Queen Victoria Street, London EC4V 4EL (GB).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: MORE UNIFORM ELECTROLUMINESCENT DISPLAYS



(57) Abstract: Certain materials are electroluminescent, and this electroluminescent effect has been used in the construction of backlights for displays. Such a backlight commonly consists of a transparent front layer (11) known as the substrate carrying over its rear face a transparent electrically-conductive film (12) forming the backlight's front electrode and covered by a layer of electroluminescent/phosphor material (13) over the rear face of which is a high-dielectric layer (16) bearing on its rear face a conductive film (17) forming the back electrode. The whole is positioned behind a mask (18) that defines whatever characters the display is to show. This use of a mask has some disadvantages, some of which can be overcome by utilising an array of suitably shaped individual electrodes (21) instead of a continuous one, and by shaping the electroluminescent material itself in discrete areas (43) each tightly matching in shape and size the relevant individual shaped back electrode (21). This latter, however, itself has drawbacks, for the colour of the phosphor commonly contrast with the colour of the surrounding insulating material, so that the discrete areas of phosphor may be visible under ambient light even when in their inactivated, "off", state. The invention deals with this problem by proposing that there be modified - or apparently modified - the colour/reflectivity of one or other (or, indeed, both) of the phosphor (43) and the surrounding insulator material (16) so as to 2match" that of the other, and thus cause the phosphor and insulator material to blend with, and so be less distinguishable from, each other.

WO 2005/015958 A2

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.